



U.S. National Ice Center



USN



USCG



NOAA

Director: CDR Casey Gon, USN

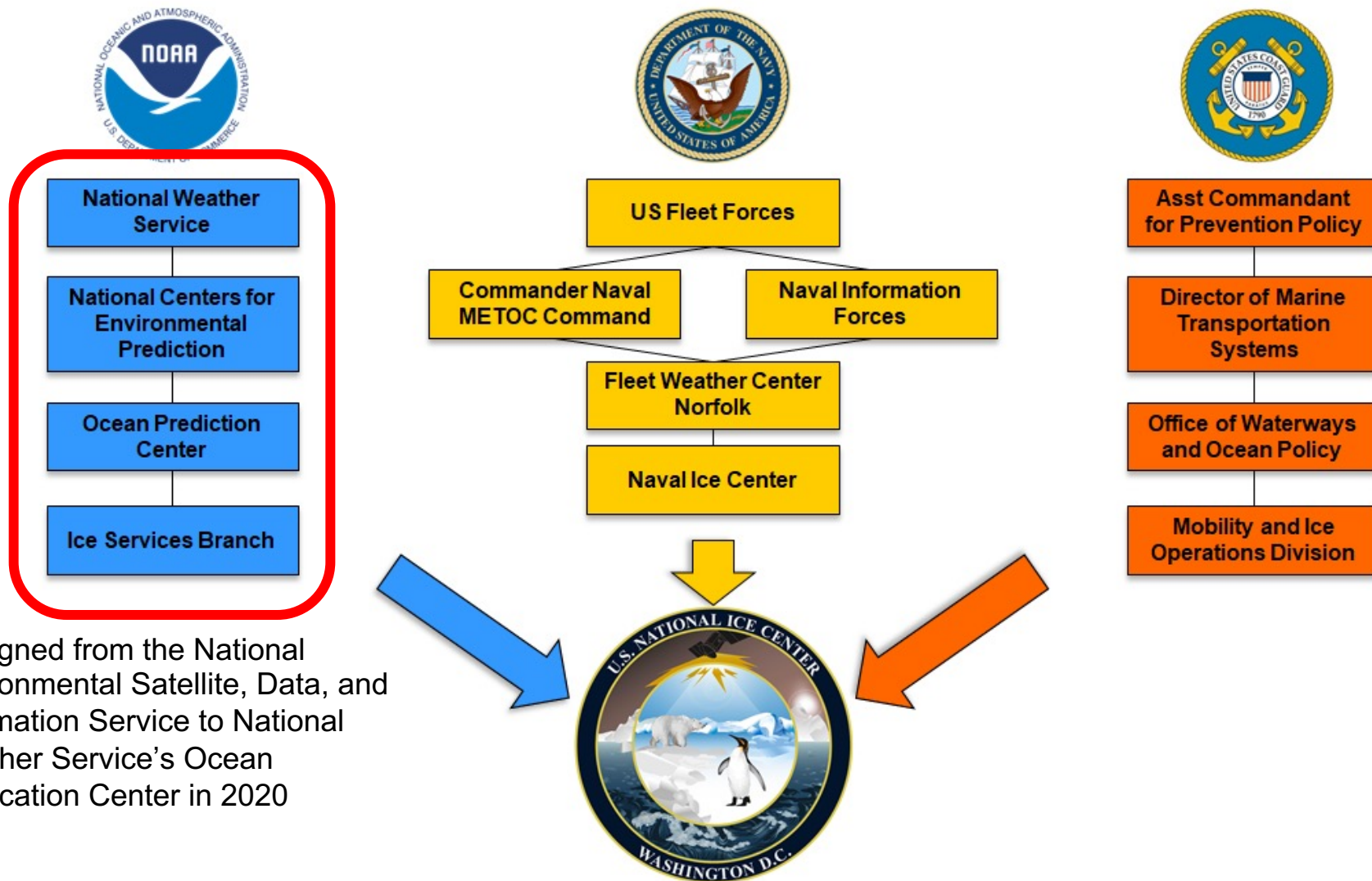
Deputy Director: Mr. Kevin Berberich, NOAA OPC

Presenter: Walt Clark, NOAA OPC

NASA CERES Science Team Meeting: Oct 13, 2021



U.S. National Ice Center Organization



Realigned from the National Environmental Satellite, Data, and Information Service to National Weather Service's Ocean Prediction Center in 2020



IMS History



Interactive Multi-Sensor Snow and Ice Mapping System

Used by a Human (as opposed to Automated)
Multiple Satellites/Instruments/Sensors used for Inputs
Snow and Ice are the analyzed outputs
Visualization and analysis platform

- **1966 to 1997:** once-a-week hand drawn analysis on physical maps at 190 km resolution.
- **1997:** Daily northern hemisphere snow and ice chart production begins on IMS
- **2008:** IMS migrates to the USNIC
- Gridded product depicts ice edge and snow cover characterization for use in numerical weather prediction.



IMS Products



Parameters Analyzed: Snow Cover, Ice Cover, Snow Depth, Days Since snow/ice were Last Observed (DSLO)

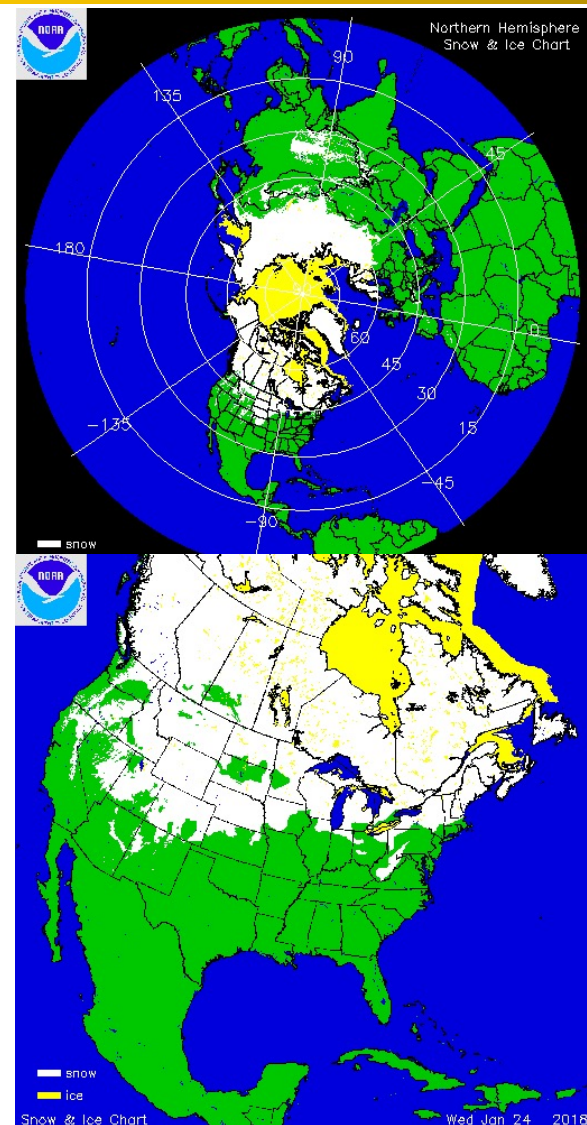
Coverage Area: Northern Hemisphere
(Global Multisensor Automated Snow and Ice mapping system, GMASI, available for S. hemi)

Standard Output Format(s): ASCII (1-, 4-, 24-km resolution), GeoTIFF (1-, 4-km resolution), GRIB2 (1-, 4-km resolution), NetCDF (1-, 4-km resolution), GIF (quick look)

Standard Dissemination Method(s): Distributed operationally via the NOAA NESDIS PDA (Production Distribution and Access), via USNIC website, and via NSIDC ftp.

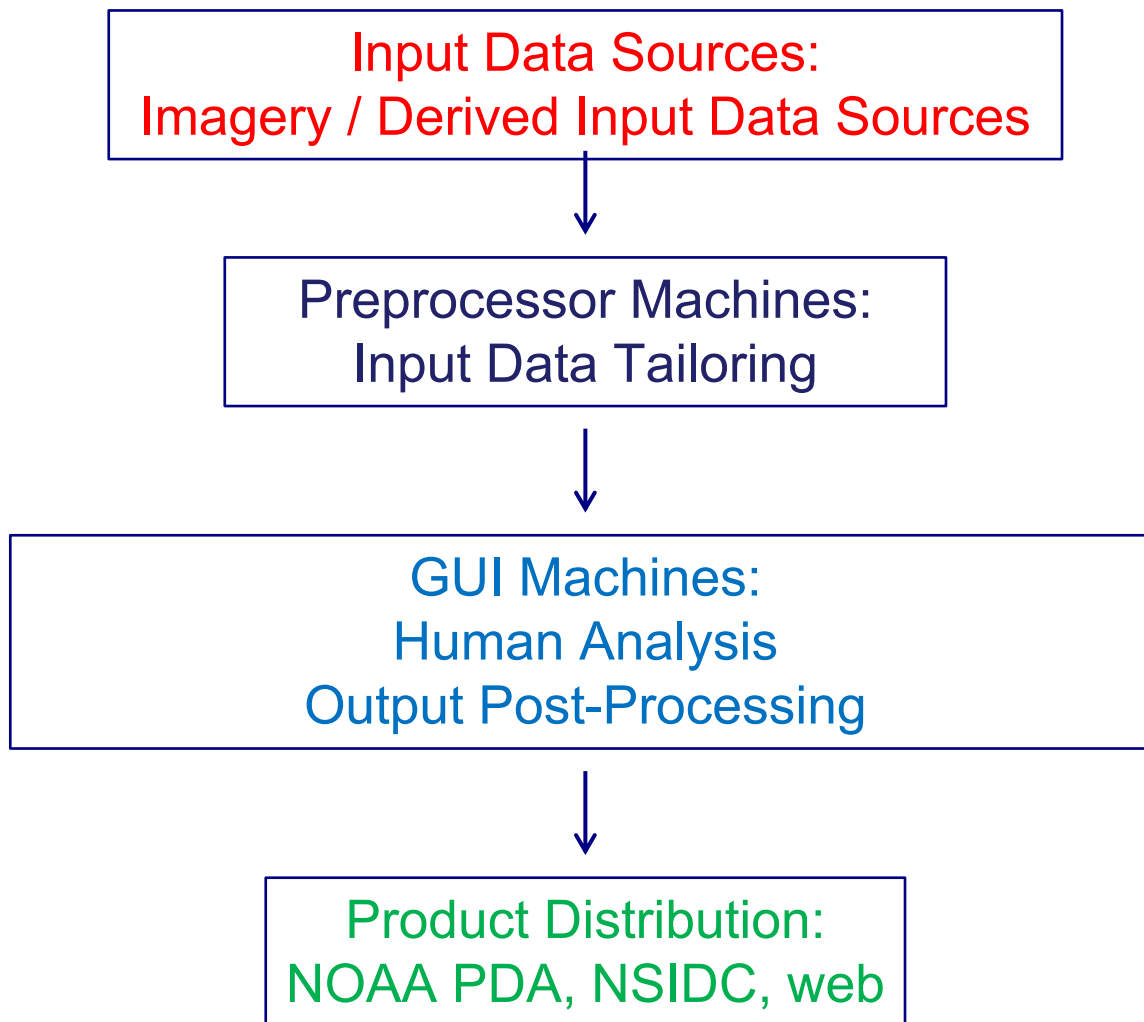
Update Frequency: Twice Daily (18 UTC NAM domain, 00 UTC)

Customers: NOAA, US Navy, National Snow and Ice Data Center, International NWS Partners, Universities, and Public.



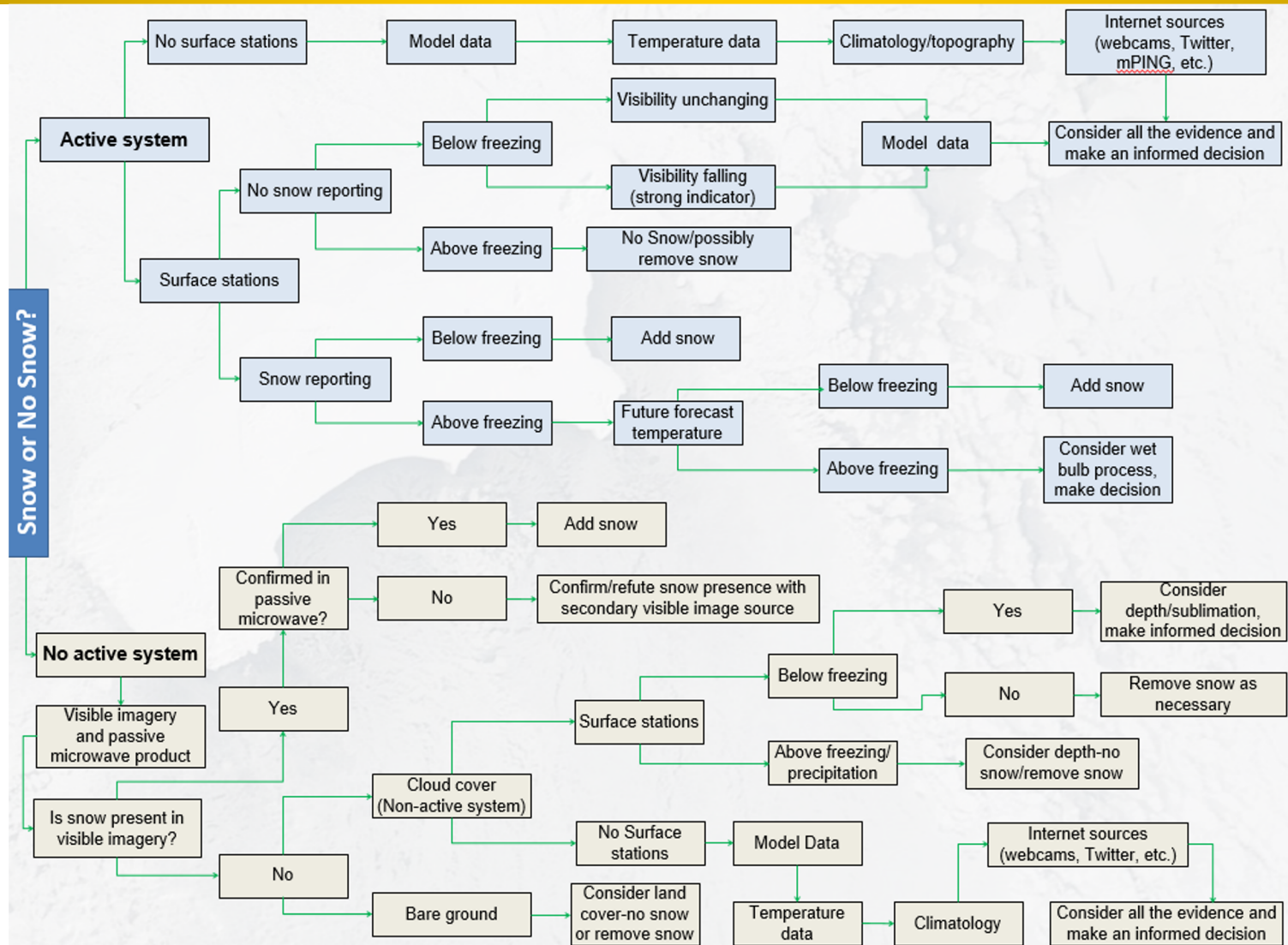


IMS Architecture





IMS Analyst Decision Tree





IMS Data Sources



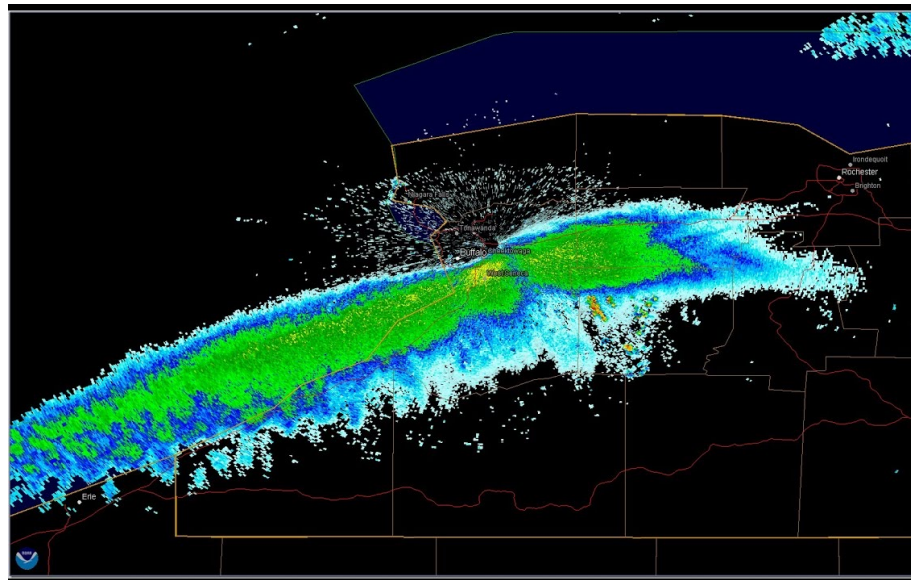
Geostationary Imagery: GOES, MSG, Himawari

Polar Imagery: Metop and NOAA 18 AVHRR channels, VIIRS (and legacy MODIS), Synthetic Aperture Radar, ASCAT, AMSR

Radar: CONUS NEXRAD

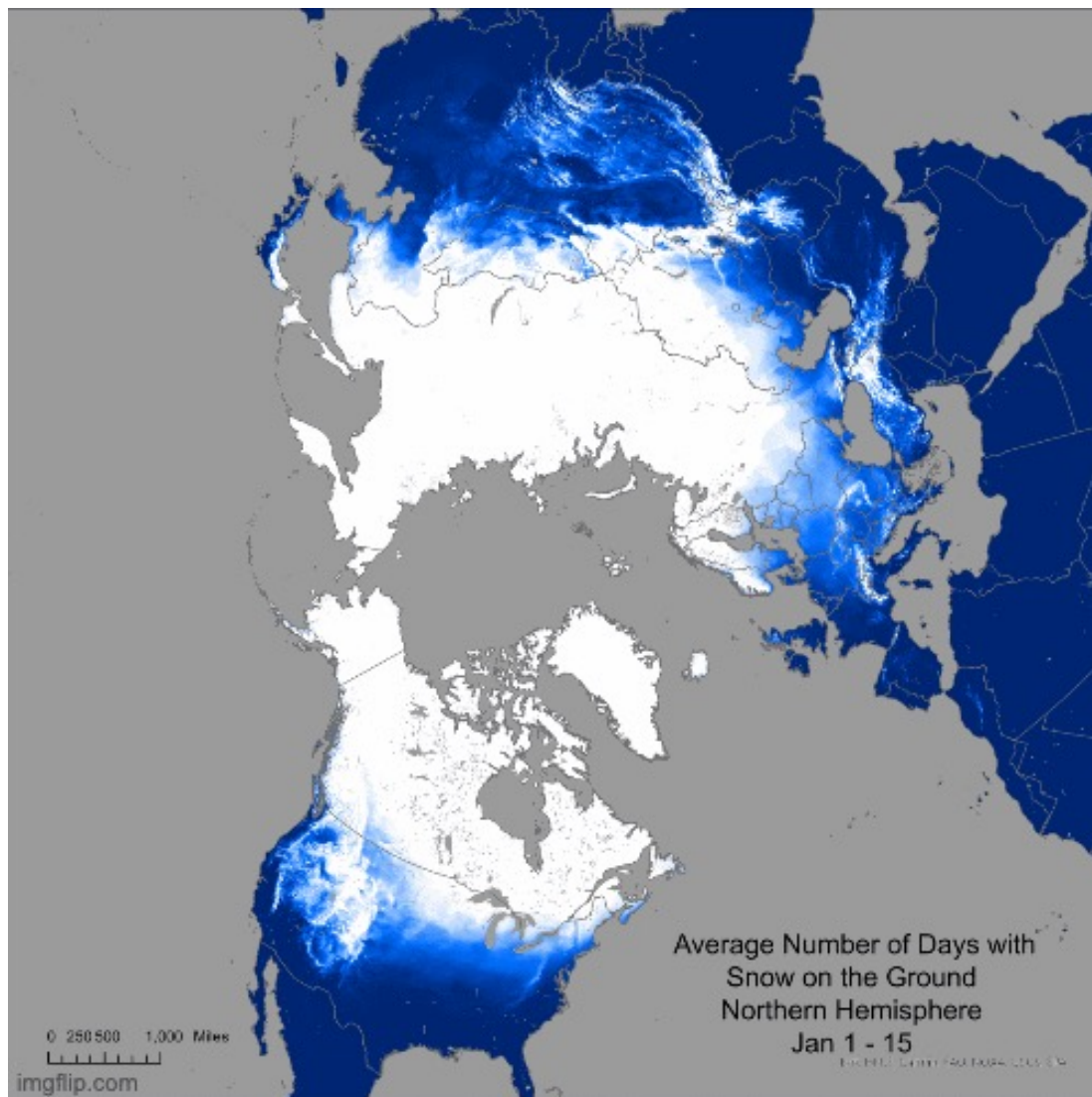
Station Measurements: World climate stations including hourly to 6 hourly obs with snowfall and snow depth (if reported). More dense station obs available in CONUS.

Ancillary: GFS data, external sea ice analyses, VIIRS and SAR derived classifications





Questions/Comments



Command Duty Officer
nic.cdo@noaa.gov
nic.cdo@navy.smil.mil

Operations Floor: (301) 817-3975
CDO: (301) 943-6977

<https://usicecenter.gov>

 [@usnatice](https://twitter.com/usnatice)

 [@usnatice](https://facebook.com/usnatice)